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10/561,908	12/21/2005	Kazunori Suenaga	Q91563	1500
72875	7590	09/02/2009	EXAMINER	
SUGHRUE MION, PLLC 2100 Pennsylvania Avenue, N.W. Washington, DC 20037			WELCH, DAVID T	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/561,908	Applicant(s) SUENAGA ET AL.	
	Examiner DAVID T. WELCH	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 17, 2009 has been entered.

Response to Amendment

2. Applicant's amendments filed on June 17, 2009 have been entered. Claims 1, 3, 5, 7, 18, and 19 have been amended. No claims have been canceled. Claims 20-31 have been added. Claims 1-31 are still pending in this application, with claims 1, 3, 5, 7, 18, 19, and 25 being independent.

Claim Objections

3. Claim 19 is objected to because of a minor typographical error: in the third limitation, "image data representing an main image" should be amended to read --image data representing a main image--. Appropriate correction is required.

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4. Claim 21 is objected to because of a minor typographical error: the claim should end with a period. Appropriate correction is required.

5. Claim 25 is objected to because of a minor typographical error: "The image reproducing apparatus, comprising" should be amended to read --**An** image reproducing apparatus, comprising--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-6, 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshitani et al. (U.S. Patent Application Publication No. 2002/0089702), referred herein as Yoshitani, in view of Hoshuyama et al. (U.S. Patent Application Publication No. 2004/0246506), referred herein as Hoshuyama, and further in view of Honma (U.S. Patent No. 6,876,389), referred herein as Honma.

Regarding claim 1, Yoshitani teaches an image processing apparatus for processing an image based on an image data set including main image data that represents a main image, reduced image data that represents a reduced image of the main image (figure 2A, JPEG compression 250; page 4, paragraph 65, lines 1-5; page 7, paragraph 109, lines 3-7), and color space identification information that expresses a

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color space related to the main image data, the main image data and the reduced image data and the color space identification information being associated with one another (page 4, paragraphs 62 and 63; paragraph 65, lines 1-5), wherein the color space identification information can indicate which of multiple color spaces including a prescribed standard color space and a particular color space is to be used (page 4, paragraph 63, lines 4-8; page 8, paragraph 110, lines 4-12; page 4, paragraph 66, lines 1-4; for example, YCbCr is the prescribed color space, while CMYK is the particular color space), the image processing apparatus comprising: a data processor configured to select data as processing target image data, and to execute processing including color space conversion of the processing target image data (figure 2A, color conversion selecting section 246, converting sections 249, 251, 247, and 248; page 4, paragraph 61, lines 1-4; page 8, paragraph 110, lines 4-12; page 4, paragraph 63, lines 4-8), wherein the data processor: executes a prescribed basic color space conversion regardless of content of the color space identification information to obtain first converted image data of the reduced image, and executes a specified color space conversion utilizing a color space specified by the color space identification information to obtain second converted image data of the main image (page 4, paragraph 63, lines 2-8; paragraph 65, lines 1-5; page 4, paragraph 66, lines 1-2; the data processor executes a prescribed basic color space conversion, in this case YCbCr, when the processing target is the reduced JPEG image; the data processor executes a specified color space conversion, in this case CMYK, when the processing target is the non-compressed main image). Yoshitani does not explicitly teach the apparatus, wherein

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the reduced image is a thumbnail image, and wherein the first and second converted image data are expressed by an identical color system. Hoshuyama teaches an image file processing apparatus comprising processing of a main image, and a thumbnail image that represents the main image, wherein color space conversions are performed to obtain color space converted image data, and wherein the converted image data are expressed by an identical color system (page 2, paragraph 23, lines 1-3; paragraph 24, lines 13-21; page 3, paragraph 26, the last 3 lines; paragraph 32, lines 1-4; paragraph 36, lines 1-6 and 9-17; page 4, paragraph 46 the last 4 lines; paragraph 47, lines 1-4; page 5, paragraph 55, lines 4-10; the color space converted data resulting from first and second conversions from sRGB and AdobeRGB, respectively, are expressed in an identical color system, namely, the "inherent color space"). As taught by Hoshuyama, this main image and thumbnail processing and expression of the converted data in identical color systems results in the output of reliable and accurate color representation, regardless of any difference in color information provided by an input device. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the processing of Hoshuyama with the invention disclosed by Yoshitani. Yoshitani in view of Hoshuyama does not teach the apparatus, wherein the data selected as a processing target is either one of the main image data and the thumbnail image data, and wherein the prescribed processing is executed if the thumbnail image is the processing target, and the specified processing is executed if the main image is the processing target. Honma teaches an apparatus for processing and displaying image data comprising main image data and thumbnail

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image data associated with the main image data (abstract), wherein image data that is selected as a processing target is either one of the main image data and the thumbnail image data (column 3, lines 20-27), and wherein a prescribed processing is executed if the thumbnail image data is the processing target, and a specified processing is executed if the main image data is the processing target (column 3, lines 20-30 and 37-39). As taught by Honma, utilizing the thumbnail/main image selection and executing respective image processings unique to the selection increases the quality of the output image data because the output image will be as faithful to the input image as possible. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine thumbnail/main image selection and processing disclosed by Honma with the invention disclosed by Yoshitani in view of Hoshuyama.

Regarding claim 2, Yoshitani in view of Hoshuyama, further in view of Honma teaches an image processing apparatus according to claim 1, and further teaches the apparatus, wherein the color space specified by the color space identification information is the particular color space (Yoshitani, page 4, paragraph 66, lines 1-2; as previously discussed, CMYK is both the identified information and the particular color space).

Regarding claims 3 and 4, the limitations of these claims correspond to the limitations of claims 1 and 2, respectively; thus they are rejected on the same grounds as the limitations of claims 1 and 2, respectively.

Regarding claims 5 and 6, the limitations of these claims correspond to the limitations of claims 1 and 2, respectively; thus they are rejected on the same grounds as the limitations of claims 1 and 2, respectively.

Regarding claim 20, Yoshitani in view of Hoshuyama, further in view of Honma teaches the image processing apparatus according to claim 2, and further teaches the apparatus, wherein the processing target image data is to be displayed (Yoshitani, page 8, paragraph 117; page 10, paragraph 144; Hoshuyama, page 4, paragraph 47, lines 1-4; page 5, paragraph 55, lines 4-10; Honma, column 3, lines 7-11 and 49-57), and wherein the particular color space is larger than sRGB color space (Hoshuyama, page 2, paragraph 24, lines 1-8; page 3, paragraph 36, lines 9-17; page 4, paragraph 45).

Regarding claim 21, the limitations of this claim correspond to the limitations of claim 20; thus they are rejected on the same grounds as the limitations of claim 20.

Regarding claim 22, Yoshitani in view of Hoshuyama, further in view of Honma teaches the image processing apparatus according to claim 2, and further teaches the apparatus, wherein the processing target image data is to be printed (Yoshitani, page 7, paragraphs 100 and 101; Hoshuyama, page 4, paragraph 47, lines 1-4; Honma, column 3, lines 13-17), and wherein the particular color space is larger than sRGB color space (Hoshuyama, page 2, paragraph 24, lines 1-8; page 3, paragraph 36, lines 9-17; page 4, paragraph 45).

Regarding claim 23, the limitations of this claim correspond to the limitations of claim 22; thus they are rejected on the same grounds as the limitations of claim 22.

8. Claims 7-9, 12, 17-19, and 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoshuyama, in view of Honma.

Regarding claim 7, Hoshuyama teaches an image display device, comprising an information acquisition unit that acquires color space information that specifies a color space related to image data representing a main image (figure 2; page 2, paragraph 22, lines 1-4; paragraph 23, lines 1-3; page 3, paragraph 26, lines 1-2; paragraphs 30 and 31); and a display unit that displays the main image converted by a first color space conversion according to the color space information (page 2, paragraph 23, lines 1-3; paragraph 24, lines 13-16; page 3, paragraph 32, lines 1-4; paragraph 36, lines 1-6; page 4, paragraph 46 the last 4 lines; paragraph 47, lines 1-4; page 5, paragraph 55, lines 4-10), and displays a thumbnail image converted by a prescribed second color space conversion regardless of the color space information (page 2, paragraph 23, lines 1-3; paragraph 24, lines 16-21; page 3, paragraph 26, the last 3 lines; paragraph 32, lines 1-4; paragraph 36, lines 9-17; page 4, paragraph 46 the last 4 lines; paragraph 47, lines 1-4; page 5, paragraph 55, lines 4-10). Hoshuyama does not explicitly teach that the first processing is executed if the main image is to be displayed, and the prescribed second processing is executed if the thumbnail image of the main image is to be displayed. Honma teaches a device for processing and displaying image data comprising main image data and thumbnail image data of the main image data (abstract), wherein either one of the main image data and the thumbnail image data is selected and is to be displayed (column 3, lines 20-27 and 49-57), and wherein a first processing is executed if the main image data is to be displayed, and a prescribed

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second processing is executed if the thumbnail image data is to be displayed (column 3, lines 20-30 and 37-39). As taught by Honma, utilizing the thumbnail/main image selection and executing respective image processings unique to the selection increases the quality of the output image data because the output image will be as faithful to the input image as possible. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine thumbnail/main image selection and processing disclosed by Honma with the invention disclosed by Hoshuyama.

Regarding claim 8, Hoshuyama in view of Honma teaches the image display device according to claim 7, and further teaches the device, wherein the information acquisition unit acquires the color space information from an image data file containing the image data (Hoshuyama, figure 2; page 2, paragraph 22, lines 1-4; page 3, paragraph 26, lines 1-2; paragraphs 30 and 31).

Regarding claim 9, Hoshuyama in view of Honma teaches the image display device according to claim 8, and further teaches the device, wherein the color space information specifies Adobe RGB color space (Hoshuyama, page 3, paragraph 36, lines 9-17; page 4, paragraph 45).

Regarding claim 12, Hoshuyama in view of Honma teaches the image display device according to claim 8, and further teaches the device, wherein the color space information specifies a color space that is larger than sRGB color space (Hoshuyama, page 2, paragraph 24, lines 1-8; page 3, paragraph 36, lines 9-17; page 4, paragraph 45).

Regarding claim 17, Hoshuyama in view of Honma teaches the image display device according to claim 8, and further teaches the device, wherein the image data is JPEG compressed data (Hoshuyama, page 2, paragraph 24, lines 16-21).

Regarding claims 18 and 19, the limitations of these claims correspond to the limitations of claim 7; thus they are rejected on the same grounds as claim 7.

Regarding claim 24, Hoshuyama in view of Honma teaches the image display device according to claim 7, and further teaches the device, wherein the image display device is provided in a printer (Hoshuyama, page 2, paragraph 20).

Regarding claim 25, the limitations of this claim correspond to the limitations of claim 7; thus they are rejected on the same grounds as the limitations of claim 7.

Regarding claim 26, Hoshuyama in view of Honma teaches the image reproducing apparatus according to claim 25, and further teaches the apparatus, wherein the color space information specifies a color space that is larger than sRGB color space (Hoshuyama, page 2, paragraph 24, lines 1-8; page 3, paragraph 36, lines 9-17; page 4, paragraph 45), and wherein the image reproducing apparatus is a printer (Hoshuyama, page 2, paragraph 20; page 4, paragraph 47, lines 1-4; Honma, column 3, lines 13-17).

Regarding claim 27, Hoshuyama in view of Honma teaches the image reproducing apparatus according to claim 25, and further teaches the apparatus, wherein the color space information specifies a color space that is larger than sRGB color space (Hoshuyama, page 2, paragraph 24, lines 1-8; page 3, paragraph 36, lines 9-17; page 4, paragraph 45), and wherein the image reproducing apparatus is a computer (Hoshuyama, page 5, paragraph 55, lines 4-10).

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Regarding claims 28 and 29, the limitations of these claims correspond to the limitations of claims 8 and 9, respectively; thus they are rejected on the same grounds as the limitations of claims 8 and 9, respectively.

9. Claims 10, 11, 13-16, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoshuyama, in view of Honma, and further in view of Elswick et al. (U.S. Patent No. 6,791,620), referred herein as Elswick.

Regarding claim 10, Hoshuyama in view of Honma teaches the image display device according to claim 9, but does not explicitly teach the apparatus, wherein the display unit is able to display a plurality of the thumbnail images in a single window. Elswick teaches an apparatus for multi-format video processing, wherein color space conversion is performed on selected image data, and wherein the image data to be processed is presented on a display unit able to display a plurality of thumbnail images in a single window (figure 7, frame browser 250; column 16, lines 8-14, 18-25, 34-36, and 42-54). As was very well known at the time of the invention, and taught by Elswick, displaying multiple thumbnail images in a single window facilitates easy and intuitive access and manipulation of the image data, thereby improving the speed and efficiency with which the image data can be processed. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the display unit of Elswick with the invention disclosed by Hoshuyama in view of Honma.

Regarding claim 11, Hoshuyama in view of Honma, further in view of Elswick teaches the image display device according to claim 10, and further teaches the device, wherein the image data is JPEG compressed data (Hoshuyama, page 2, paragraph 24, lines 16-21).

Regarding claims 13 and 14, the limitations of these claims correspond to the limitations of claims 10 and 11, respectively; thus they are rejected on the same grounds as the limitations of claims 10 and 11, respectively.

Regarding claims 15 and 16, the limitations of these claims correspond to the limitations of claims 10 and 11, respectively; thus they are rejected on the same grounds as the limitations of claims 10 and 11, respectively.

Regarding claims 30 and 31, the limitations of these claims correspond to the limitations of claims 10 and 11, respectively; thus they are rejected on the same grounds as the limitations of claims 10 and 11, respectively.

Response to Arguments

10. Applicant's arguments with respect to the 102 and 103 rejections have been fully considered, but are moot in view of the new ground(s) of rejection.

11. Applicant's arguments, see page 13, filed June 17, 2009, with respect to the first four claim objections have been fully considered and are persuasive. The amendments to the claims are sufficient to overcome these informalities; thus these objections to the claims have been withdrawn. The final claim objection, however, regarding claim 19, is respectfully maintained, as this informality remains in the claim.

Conclusion

12. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Ohnogi (U.S. Patent Application Publication No. 2002/0036702); Digital camera and image reproducing apparatus and method.

Okubo (U.S. Patent Application Publication No. 2004/0174458); Image reproduction apparatus and method.

Yamamoto et al. (U.S. Patent Application Publication No. 2004/0263533); Image processing apparatus, image processing method, program for implementing image processing method, and recording medium recording program.

Fujinawa (U.S. Patent Application Publication No. 2006/0050151); Digital still camera.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID T. WELCH whose telephone number is (571)270-5364. The examiner can normally be reached on Monday-Thursday, 8:00-5:30 EST, and alternate Fridays, 8:00-4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xiao Wu can be reached on (571)272-7761. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/dtw/

/XIAO M. WU/

Supervisory Patent Examiner, Art Unit 2628